

AMENDMENT AND RESPONSE TO OFFICIAL ACTION DATED

Applicants: Kazuo OSHNISHI, et al.

Serial No.: 10/082,000

Examiner: Hanh N. NGUYEN

Art Unit: 2834

Atty. Dkt.: W1010.136-US-01 [Formerly 134.140]

IN THE ABSTRACT

Please substitute the following amended Abstract for the abstract as currently pending. A substitute sheet containing the amended Abstract is also provided.

ABSTRACT OF THE DISCLOSURE

A three-phase hybrid type stepping motor of the present invention comprises a stator, a rotor arranged concentrically with the stator and with an air gap therebetween, six stator poles extending radially and formed at a regular pitch on the inner peripheral surface of an annular stator yoke, each of the stator poles having a plurality of small stator teeth at the tip end thereof, the rotor having two splitted rotor elements and a permanent magnet held therebetween and magnetized so as to form N and S poles in the axial direction thereof, fifty of small rotor teeth formed at a regular pitch on the outer peripheral surface of each of the rotor elements, the two splitted rotor elements being shifted from each other in angular position by a $\frac{1}{2}$ pitch of the small rotor teeth, wherein a permeance distribution of the small stator teeth is a vernier pitch balanced by a six or three order harmonic wave, and a ratio of the width of the pole tooth to the rotor teeth pitch is set to 0.35 – 0.45.

REMARKS

By this amendment, Claims 1-4 have been amended. New Claims 9-12 have been added, such that Claims 1-12 are now pending. Various amendments have also been made to the specification. Review and reconsideration of the claims, as amended, is respectfully requested.

In paragraph 1 of the Office Action, the Examiner objected to the Specification, stating that it was unclear what was prior art and what was related to the present invention. In response to this objection, the specification has been amended for clarification purposes. In particular, the

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3. (Amended) The three-phase hybrid type stepping motor as claimed in Claim 1, wherein a number of the small rotor teeth is fifty, a number of the small stator teeth is eight, a tooth pitch is 7.05, and a tooth width ratio of the small rotor teeth with the small stator teeth is set to [0.36-0.44] 0.35-0.45.

4. (Amended) The three-phase hybrid type stepping motor as claimed in Claim 2, wherein a number of the small rotor teeth is fifty, a number of the small stator teeth is eight, a tooth pitch is 7.05, and a tooth width ratio of the small rotor teeth with the small stator teeth is set to [0.36-0.44] 0.35-0.45.

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